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STATE OF MONTANA

BULLETIN

OF THE

Department of Public Health

Vol. 6

November 15, 1913

No. 8

MONTANA STATE BOARD OF HEALTH

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State Bacteriologist,

ALLAN TUFFORD,

Consulting Architect.

M. L. MORRIS,

Consulting Sanitary Engineer.

HELENA, MONTANA.

Published Monthly at Helena, by the State Board of Health.

"The science of disease prevention, if properly applied, can add fifteen years to the present average length of human life."—Prof. Irving Fisher, Yale.

This Bulletin will be mailed monthly to any person in Montana upon request mailed to the Secretary of the State Board of Health at Helena.



THE IRONY OF FATE.

On account of the number of cases of smallpox occurring in Great Falls, the State Board of Health recently issued an order that all children attending the public schools in Great Falls be required to present certificates of successful vaccination.

This order had the effect of stirring up the anti-vaccinationists in that city and they carried on an active campaign against vaccination until one of their leaders contracted smallpox. We wish to state to the credit of this person that when she found she had the disease, she sacrificed her anti vaccination principles and had her children vaccinated.

The September Report on Communicable Diseases is given in this issue as it was advertently omitted in the last issue of the Bulletin.

TICK PARALYSIS—A REVIEW.

On "Tick Paralysis" in sheep and man following bites of *Dermacentor venustus*, by Seymour Hadwen, D. V. Sci., Pathologist to the Dominion Department of Agriculture, Experimental Farm, Agassiz, B. C., Canada; Parasitology, Vol. VI, No. 3, October 13, 1913.

For three years (1910 to 1913) Doctor Hadwen received complaints from a sheep farmer living near Kermeos, British Columbia, concerning a paralysis affecting his sheep. Nine hundred sheep had been purchased from Montana in the autumn of 1910. In March, 1911, his sheep began to show symptoms of paralysis. Up to April 7th, he lost forty-six old sheep. In 1912, from March 1st to 15th, thirty-four yearlings were ill, but no old sheep; ten died. Later in the same year many more were affected, about three hundred in all, and eighty died. Veterinary Inspector Germyn saw some of these animals and reported that they were suffering from a form of paralysis.

In April, 1913, Doctor Hadwen visited the locality, but was too late to see recent cases. He was shown one recovered case which had a large tick, cut in half, still attached to its back. This suggested that the disease was caused by tick bites.

This article calls attention to a paper by J. L. Todd, entitled, "Tick Bite in British Columbia," Canadian Medical Association Journal, 1912. Doctor Todd had circularized the doctors

of British Columbia for information concerning ill-effects following tick bites in man and had received six records of paralysis following tick bites, some having caused death. In all of these cases, excepting one, a tick was found attached to the neck or to the back of the patient; this one had a tick attached to the right temple. Mention is also made of Bishop and King having heard of similar cases of paralysis in children in Montana.

Doctor Hadwen took ticks to his laboratory at Agassiz, B. C., and experimentally produced the disease in lambs. He states, "In three consecutive cases experimentally produced by me in lambs, paralysis occurred six to seven days after the ticks were put on. In no case did I fail to produce paralysis through the agency of the tick bites."

In the experiments the ticks showed marked preference for attachment along the spine. On Lamb I, ten ticks attached within half an inch of the back bone and one at the base of the right ear. On Lamb III, three females attached along the back bone, one male at the base of the right ear and one female on the brisket. On Lamb IV, two females and one male attached along the back bone.

Attempted inoculation failed and the causative agent was not discovered. The writer states, "The most likely hypothesis is that the tick injects a toxin which gives rise to symptoms appearing coincidentally with the complete engorgement of the tick." Animals used in the experiments did not show fever temperatures. From an economic point of view the disease is considered to be of some importance to the sheep industry in British Columbia.

This article is of unusual interest to Montana people. The species of tick concerned is the one that causes Rocky Mountain Spotted Fever in certain localities in our State and elsewhere. It is entirely distinct from the ordinary "sheep tick" which is a degenerate fly (Diptera). The fact that the nine hundred sheep mentioned came from Montana probably does not indicate that the disease was introduced into British Columbia through them.

I recall with much distinctness, but without full details, that Doctor J M Waters of Bozeman (now deceased) related having been called to attend a child in Bozeman who was suffering from paralysis. A large tick was found attached over

the spine on the back. The tick was removed and the child soon recovered.

R . A. COOLEY,

State Entomologist.

REPORT OF TYPHOID FEVER IN BABIES.

By Mott. H. Arnold, Billings.

Until recently typhoid fever in very young children has been considered a rare disease. But later reports seem to prove the contention that some and probably many, of our so called "summer complaints" in babies, have been due to the *Bacillus-typhosis*. I have had recently two cases of *Ilio-Colitis* in children characterized by high fever, fairly rapid pulse, and diarrhoea, presenting no other symptoms that would suggest typhoid fever; but both gave a positive Widal. Of course we all read we may get a positive Widal and not have typhoid. But these two cases suggested to me that possibly I have been over-looking typhoid in babies. No examinations were made of the stools isolate the *Bacilli*. The first case was in a bottle baby—14 months old. Always been perfectly healthy until it began to refuse its bottle and became fretful. This continued for ten days when I saw the baby, the temperature was 104 degrees F., Pulse 136, some distention and diarrhoea. I was inclined to call this a case of *Ilio-Colitis* as there apparently was no chance for typhoid infection; there were no rose spots, not a typical typhoid tongue, spleen not enlarged and no other symptoms that we usually find in typhoid in children or in adults. I had a Widal made, made by Mr.

Starz, the State Bacterologist. The report was positive. The child was sick with a steady temperature and rapid pulse for four weeks and then gradually came to normal making a good recovery.

The second case was in a child 16 months old, had not nursed from the mother's breast for six months. But was on the bed with the mother who had had a severe attack of typhoid some four weeks before coming to Billings. After about ten days residence here, the child refused nourishment; had diarrhoea, steady high fever, 103 F., Pulse 130 slight abdominal distension, no enlarged spleen, no eruption, stools, tongues or facies, not characteristic of typhoid infection. Still the Widal made by Mr. Starz was positive. The child made

an uneventful recovery at the end of two weeks.

The first case may not have been typhoid fever, but some other organism giving the agglutinating power. The second case from the history of the mother's illness, evidently was a real case of typhoid. At any rate where there is a case of Acute Ilio-Colitis it behooves to use every method of diagnosis at our command for we may be over-looking an infection due to the *Bacilis Typhosis*.

BACTERIOLOGICAL EXAMINATIONS MADE DURING THE MONTH OF OCTOBER, 1913.

By E. Starz, Bacteriologist.

October 1st:

Blood for Widal Reaction for Dr. R. H. Beach, Glendive, Mont. Found: Negative.

October 2nd:

Pus for Gonococci for Dr. Danskin, Glendive, Mont. Found: Positive.

October 3rd:

Blood for Widal Reaction for Dr. R. H. Beach, Glendive, Mont. Found: Positive.

October 4th:

Blood for Widal Reaction for Dr. R. H. Beach, Glendive, Mont. Found: Positive.

Blood for Widal Reaction for Dr. Danskin, Glendive, Mont. Found: Negative.

October 5th:

Sputum for Bac. Tuberc., for Dr. S. K. Campbell, Harlowton, Mont. Found: Positive.

October 10th:

Culture for Suspected Diphtheria for Dr. Blair, Bozeman, Mont. Found: Bac. Diphtheria.

Pus for Gonococci for Dr. Sproule, Harlem, Mont. Found: Positive.

Two cultures from suspected Diphtheria for Dr. A. M. Macauley, Great Falls. Found: Negative.

Blood for Widal Reaction for Dr. Dogge, Helena, Mont. Found: Negative.

Culture from suspected Diphtheria for Dr. A. M. Macauley, Great Falls, Mont. Found: Negative.

Blood for Widal Reaction for Drs. Sump & Smith, Bozeman, Mont. Found: Positive.

Sputum for Bac. Tuber. for Dr. Bassow, Havre, Mont.
Found: Negative.

Two blood samples for Widal Reaction for Dr. Dunn,
Lewistown, Mont. Found: One Positive and one Negative.

October 11th:

Blood for Widal Reaction for Dr. W. T. Thornton, Stevensville, Mont. Found: Positive.

Blood for Widal Reaction for Dr. E. M. Porter, Fort Benton, Mont. Found: Positive.

October 13th:

Blood for Widal Reaction for Dr. T. C. Dunn, Lewistown, Mont. Found: Positive.

Two cultures from suspected Diphtheria for Dr. G. McCoy, Joliet, Mont. Found: Negative.

October 17th:

Blood for Widal Reaction for Dr. R. H. Beach, Glendive, Mont. Found: Positive.

Blood for Widal Reaction for Dr. M. Arnold, Billings, Mont. Found: Positive.

Pus for Gonococci for Dr. F. Bucken, Hamilton, Mont. Found: Positive.

Sputum for Bac. Tuberc. for Dr. A. C. Blackstone, Absarokee, Mont. Found: Negative.

October 20th:

Sputum for Bac. Tuberc. for Drs. Jump & Smith, Bozeman, Mont. Found: Negative.

Blood for Widal Reaction for Dr. McCann, Salesville, Mont. Found: Positive.

Pus for Actinomycosis for Dr. F. F. Attix, Lewistown, Mont. Found: Negative.

October 21st:

Blood for Widal Reaction for Dr. W. H. Melvin, Chester, Mont. Found: Positive.

October 22nd:

Blood for Widal Reaction for Dr. B. V. McCabe, Helena, Mont. Found: Negative.

Blood for Widal Reaction for Dr. E. M. Porter, Fort Benton, Mont. Found: Negative.

Sputum for Bac. Tuberc. for Dr. R. C. Holgate, Manhattan, Mont. Found: Negative.

October 23rd:

Sputum for Bac. Tuberc. for Dr. B. V. McCabe, Helena, Mont. Found: Negative.

Blood for Widal Reaction for Dr. W. C. Riddell, Helena, Mont. Found: Positive.

October 24th:

Culture suspected Diphtheria for Dr. A. Macauley, Great Falls, Mont. Found: Streptococci.

Blood for Widal Reaction for Dr. H. Clark, Billings, Mont. Found: Negative.

October 28th:

Blood for Widal Reaction for Dr. A. Husser, Hingham, Mont. Found: Positive.

Blood for Widal Reaction for Dr. R. H. Beach, Glendive, Mont. Found: Positive.

October 28th:

Blood for Widal Reaction for Dr. Arthur Jordan, Twin Bridges, Mont. Found: Positive.

October 29th:

Blood for Widal Reaction for Dr. Cockrell, Hinsdale, Mont. Found: Positive.

October 30th:

Culture suspected Diphtheria for Dr. B. V. McCabe, Helena, Mont. Found: Negative.

October 31st:

Sputum for Dr. L. E. Wood, Box Elder, Mont. Found: Streptococci.

Respectfully submitted,

EMIL STARZ,

Bacteriologist.

COMMUNICABLE DISEASES REPORTED TO THE
STATE BOARD OF HEALTH FOR THE MONTH
OF SEPTEMBER, 1913.

SMALLPOX—Blaine, 2; Broadwater, 11; Hill, 1; Lewis and Clark, 1; Silver Bow (Excl. of Butte), 4; total, 19, total August, 1913, 27.

DIPHTHERIA—Cascade (Excl. of Great Falls), 1; Great Falls, 3; Custer, 1; Dawson, 1; Missoula City, 1; Silver Bow (Excl. of Butte), 1; Butte, 1; total, 9; total August, 1913, 19.

SCARLET FEVER—Beaverhead, 1; Carbon, 2; Custer, 1; Madison, 2; Musselshell, 2; Powell, 1; Silver Bow (Excl. of Butte), 8; Butte, 5; Yellowstone (Excl. of Billings), 1; Billings, 9; total, 32; total August, 1913, 23.

TYPHOID FEVER—Blaine, 1; Cascade (Excl. of Great Falls), 1; Great Falls, 4; Carbon, 1; Custer, 4; Dawson, 12; Fergus, 3; Flathead, (Excl. of Kalispell), 3; Kalispell, 3; Hill, 1; Lincoln, 1; Sheridan, 1; Missoula City, 1; Livingston, 1; Ravalli, 2; Butte, 1; Teton, 1; Valley, 3; Yellowstone (Excl. of Billings), 2; Billings, 19; total, 65; total, August, 1913, 59.

MEASLES—Blaine, 1; Carbon, 1; Dawson, 1; Fergus, 5; Missoula (Excl. of Missoula City), 3; Missoula City, 9; Butte, 1; Teton, 11; total, 32; total August, 1913, 25.

CEREBRO SPINAL MENINGITIS—Butte, 1; total, 1; total August, 1913, 2.

TUBERCULOSIS—Great Falls, 2; Dawson, 1; Sanatorium, 5; Missoula City, 1; Butte, 1; total, 10; total August 1913, 15.

WHOOPING COUGH—Livingston, 4; Butte, 1; total, 5; total August, 1913, 2.

COMMUNICABLE DISEASES REPORTED TO THE
STATE BOARD OF HEALTH FOR THE MONTH
OF OCTOBER, 1913.

SMALLPOX—Blaine, 4; Broadwater, 7; Carbon, 5; Cascade (Excl. of Great Falls), 7; Great Falls, 5; Flathead (Excl. of Kalispel 1; Hill, 4; Ravalli, 19; Silver Bow (Excl. of Butte), 1; Butte, 1; total, 54; total, Sept. 1913, 19.

Diphtheria—Custer, 1; Sheridan, 3; Butte, 1; total, 5; total Sept., 1913, 9.

Diphtheria—Custer, 1; Sheridan, 3; Butte, 1; total, 5; total, Sept., 1913, 9.

SCARLET FEVER—Great Falls, 3; Bozeman, 4; Hill, 1; Madison, 7; Missoula City, 3; Musselshell, 1; Livingston, 1; Silver Bow, (Excl. of Butte), 12; Butte, 8; Billings, 20; total 60; total, Sept., 1913, 32).

TYPHOID FEVER—Beaverhead, 1; Big Horn, 1; Blaine, 3; Carbon, 2; Cascade (Excl. of Great Falls), 7; Great Falls, 9; Chouteau, 1; Custer, 9; Dawson, 2; Fergus, 18; Flathead (Excl. of Kalispell), 2; Kalispell, 3; Bozeman, 1; Hill, 9; Lincoln, 1; Madison, 1; Missoula City, 1; Park, 3; Livingston, 1; Rosebud, 2; Butte, 1; Teton, 1; Valley, 4; Billings, 25; total, 108; total, Sept., 1913, 65.

MEASLES—Fergus, 6; Meagher, 3; Missoula (Excl. of Missoula City), 3; Missoula City, 4; Sheridan, 2; Butte, 2; Teton, 34; Billings, 3; total, 57; total, Sept., 1913, 32.

TUBERCULOSIS—Flathead, 1; Madison, 1; Meagher, 1; Missoula City, 3; Sheridan, 2; Butte, 1; total, 9; total, Sept., 1913, 10.

WHOOPING COUGH—Dawson, 1; Sheridan, 6; Butte, 1; total, 8; total, Sept., 1913, 5.

ANTERIOR POLIOMYELITIS—Broadwater, 1; Great Falls, 2; Fergus, 2; Sheridan, 1; total, 6; total, Sept., 1913, 5.

DEATHS (EXCLUSIVE OF STILLBIRTHS, REPORTED TO STATE BOARD
OF HEALTH FOR THE MONTH OF OCTOBER, 1913, ARRANGED
ACCORDING TO COUNTIES AND PRINCIPAL CITIES.

Totals	All Other Causes	Alcoholism	Suicide	Violence	Acute Intestinal Diseases	Malignant Tumors	Organic Heart Disease	Nephritis	Pneumonia	Whooping Cough	Meningitis	Typhoid Fever	Measles	Scarlet Fever	Diphtheria	Tuberculosis	Small Pox	Spotted Fever
6	1			2		1		1	1							1		
19	10	1			1				3									
14	2				1													
21	7				1			1	1	1		1		1				
13	7							1	2			4						
14	5				2			1	1	1								
7	5							1	2									
9	7	1			1													
21	5				3			1	1			1						
11	2				2			1	1			1						
4	5				1			1	2									
7	1								1									
1	4				1													
15	7				2				1			1						
1	1				1	1			1									
8	4								2									
3	1				1			1										
5	3				1				1									
17	6	1			1			2	1									
2	1								1									
5	2				1			1										
7	2				1			1	1									
4									1									
19	9	1			1	1		1	1					1				
70	22	1			11			5	6	8				1		10		
1																		
19	3	3						1	1			1						
8	2																	
21	8				1													
1	1																	
11	4							2										
8	3				3			1										
4	3							1										
TOTALS	177	14	3	8	61	18	43	24	38	5	14	3	32	3	32	3	32	

Stillbirths, 27.

Monthly Population, 375,000.

Monthly Death Rate per 1,000 Population, 1.17.

Annual Death Rate per 1,000 Population, 14.04.

**BIRTHS (EXCLUSIVE OF STILLBIRTHS), REPORTED TO THE STATE
BOARD OF HEALTH FOR THE MONTH OCTOBER, 1913, AND
COMPARATIVE BIRTH AND DEATH RECORD IN THE STATE**

	Males.	Females.....	Totals.	Deaths.	Excess of Births.	Excess of Deaths.
Beaverhead	3	1	4	6	..	2
Broadwater	4	6	10	7	3	..
Carbon	20	21	41	19	22	..
Cascade (Excl. of)	10	8	18	14	4	..
Great Falls	22	35	57	21	36	..
Chouteau	5	3	8	14	..	6
Custer	7	15	22	13	9	..
Dawson	20	16	36	14	22	..
Deer Lodge	1	..	1	7	..	6
Anaconda	11	11	22	9	13	..
Fergus	16	30	46	21	25	..
Flathead (Excl. of)	12	7	19	11	8	..
Kalispell	7	4	11	4	7	..
Gallatin (Excl. of)	3	7	10	5	5	..
Bozeman	10	7	17	6	11	..
Granite	1	..	1	1	..	..
Jefferson	5	6	11	7	4	..
Lewis and Clark (Excl. of)	2	..	2	5	..	3
Helena	14	13	27	15	12	..
Lincoln	8	6	14	7	7	..
Madison	5	5	10	8	2	..
Meagher	4	1	5	3	2	..
Missoula (Excl. of)	5	2	7	5	2	..
Missoula City	11	14	25	17	8	..
Musselshell	11	6	17	2	15	..
Park (Excl. of)	4	5	9	5	4	..
Livingston	6	7	13	7	6	..
Powell	5	1	6	7	..	1
Ravalli	3	10	13	7	6	..
Rosebud	9	2	11	4	7	..
Sanders	1	3	4	4	..	..
Silver Bow (Excl. of)	13	8	21	19	2	..
Butte	41	28	69	70	..	1
Sweet Grass	5	1	6	1	5	..
Teton	21	22	43	19	24	..
Valley	7	7	14	8	6	..
Yellowstone (Excl. of)	5	3	8	4	4	..
Billings	25	11	36	21	15	..
Blaine	9	12	21	1	20	..
Big Horn	2	2	4	..	4	..
Hill	10	10	20	11	9	..
Sheridan	7	13	20	8	12	..
Stillwater	3	5	8	4	4	..
TOTALS	393	374	767	441	345	19

Stillbirths, 27.

DIVISION OF FOODS AND DRUGS.

Dr. W. F. Cogswell, Secretary State Board of Health,
Food and Drug Commissioner.

F. J. O'Donnell, Inspector.

LABORATORY STAFF.

W. M. Cobleigh, Chemist.

D. L. Weatherhead, Analyst.

D. B. Swingle, Bacteriologist.

Carl Gottschalck, Assistant Analyst.

Nina Armstrong, Clerk and Stenographer.

LABORATORY REPORT.

Samples Reported During the Month of October.

Classification.	No. Legal.	No. Illegal.	Unofficial.	Total.
Milk	44	11	3	58
Cream	10	1	2	13
Ice Cream	2	..	..	2
Water .....	..	..	..	30
TOTAL	56	12	5	103

One hundred three samples were reported to the Secretary of the State Board of Health during the month of October.

Of the sixty-eight samples of food whose analysis could be used for official purposes, fifty-six or eighty-two per cent were legal while twelve or eighteen per cent were illegal.

There are fifty-five official samples of milk. Forty-four, or eighty per cent were up to the standard, while eleven, or twenty per cent were illegal. Of the eleven illegal samples, seven were below standard in fat, two below standard in solids not fat and two were below standard in fat and solids not fat.

Of the eleven samples of cream, ten or ninety-one per cent were legal, while one, or nine per cent was low in fat.

The two samples of ice cream complied with the standard.

Thirty samples of water were reported. On thirteen both chemical and bacteriological examinations were made, on nine chemical examination only was made, on six bacteriological

examination only was made and on two both sanitary and mineral chemical analyses were made. They were sent in as follows:

Billings.....	4	Circle.....	2	Columbus.....	2
Great Falls...	6	Harlowton.....	4	Libby.....	6
Livingston...	6				

The samples whose analyses could not be used for official purposes were collected as follows:

Cream	Helena.....	2
Milk	Helena.....	3

A detailed report of the official food samples follows:

MILK AND CREAM. Standard or Above.

MILK:

Lab. No.	Date.	Obtained From.	Town.	Total Solids %	Solids Not Fat	Fat.
2535	10- 6-13	C. H. Shaver	Glasgow	13.42	9.07	4.35
2537	10- 6-13	W. T. Shannon	Glasgow	12.02	8.62	3.40
2540	10- 6-13	H. Caselberg	Malta	13.54	8.94	4.60
2542	10- 6-13	Kram & Anderson ..	Malta	12.78	8.68	4.10
2543	10- 6-13	Parlor Cafe	Malta	13.62	9.02	4.60
2544	10- 6-13	Yon Chong & Co.	Malta	12.35	9.05	3.30
2545	10- 6-13	Max Sklomer	Malta	13.91	8.91	5.00
2560	10-11-13	Dan McDonald	Helena	13.74	9.14	4.60
2562	10-11-13	L. M. Kinney	Helena	14.09	9.39	4.70
2566	10-11-13	Joe A. Schnyder	Helena	13.92	9.42	4.50
2569	10-11-13	L. A. Ramsey	Helena	12.97	9.17	3.80
2571	10-11-13	F. Brewer	Helena	13.06	9.36	3.70
2573	10-13-13	Wm. Burton	Helena	13.77	9.17	4.60
2574	10-13-13	A. M. Whitcomb	Helena	13.22	9.17	4.05
2576	10-13-13	McComas & Middlemas	Helena	14.63	9.23	5.40
2581	10-13-13	J. L. Bompart	Helena	12.97	9.07	3.90
2582	10-13-13	E. D. Marsh	Sheridan	12.27	8.97	3.30
2583	10-13-13	Estella Glasser	Sheridan	13.22	9.47	3.75
2585	10-13-13	Mrs. Julia Elser	Sheridan	13.59	9.39	4.20
2586	10-13-13	Mrs. Mina Spuhler	Sheridan	13.19	9.09	4.60
2587	10-13-13	A. P. Rassiter	Sheridan	12.19	8.94	3.25
2588	10-13-13	Mrs. Aug. Steiner	Sheridan	13.65	9.15	4.50
2589	10-13-13	Mrs. C. W. Hudson..	Sheridan	12.19	8.79	3.40
2594	10-13-13	Mrs. J. Beaber	Virginia City	13.06	8.96	4.10
2595	10-13-13	Mrs. Jas. Vanderbeck.	Virginia City	13.58	9.28	4.30
2596	10-13-13	Mrs. Geo. Gohn	Virginia City	13.53	9.63	3.90
2597	10-13-13	Mrs. M. Gilbert	Virginia City	14.51	9.31	5.20
2598	10-13-13	Mrs. C. H. Buford	Virginia City	16.56	9.66	6.90
2599	10-13-13	Mrs. Chas. Baker	Virginia City	16.09	8.79	7.30
2600	10-13-13	Mrs. F. F. Conway...	Virginia City	16.25	8.75	7.50
2601	10-13-13	Mrs. M. M. Duncan..	Virginia City	13.31	9.11	4.20
2602	10-13-13	Mrs. John O'Gorman..	Virginia City	13.22	9.02	4.20
2603	10-13-13	E. C. Hockley	Whitehall	12.94	8.94	4.00
2604	10-13-13	Mrs. Schmidt	Whitehall	13.45	9.45	4.00
2605	10-13-13	Mrs. Borden (Rest.)...	Whitehall	13.31	9.11	4.20
2606	10-13-13	Hotel Whitehall	Whitehall	13.20	9.30	3.90
2607	10-13-13	Schneider & Mathey..	Whitehall	13.92	9.42	4.50
2611	10-13-13	Park Restaurant	Livingston	15.52	8.92	6.60
2612	10-13-13	Brown & Sohl	Livingston	12.60	9.20	3.40
2614	10-13-13	W. D. Heller	Twin Bridges	15.97	9.77	6.20
2615	10-13-13	V. M. Keeton	Twin Bridges	13.14	9.54	3.60
2616	10-13-13	Wm. Limperick	Twin Bridges	13.18	8.98	4.20
2617	10-13-13	Miss Eva Jones	Twin Bridges	13.24	9.24	4.00
2639	10-31-13	J. P. Thompson	Billings	14.63	9.83	4.80

MILK AND CREAM. Standard or Above.

CREAM:

Lab. No.	Date.	Obtained From.	Town.	Total Solids %	Solids Not Fat	Fat.
2559	10-11-13	Dan McDonald	Helena .....	.....	.....	33.0
2561	10-11-13	L. M. McKinney	Helena .....	.....	.....	34.0
2567	10-11-13	Joe A. Schnyder	Helena .....	.....	.....	23.8
2568	10-11-13	L. A. Ramsey	Helena .....	.....	.....	29.0
2570	10-11-13	F. Brewer	Helena .....	.....	.....	33.0
2572	10-11-13	Wm. Burton	Helena .....	.....	.....	30.0
2575	10-13-13	A. M. Whitcomb	Helena .....	.....	.....	34.0
2577	10-13-13	McComas & Middlemas	Helena .....	.....	.....	28.5
2613	10-13-13	Brown & Sohl	Livingston .....	.....	.....	20.0
2580	10-13-13	J. L. Bompert	Helena .....	.....	.....	27.0

ICE CREAM:

Lab. No.	Date.	Obtained From.	Town.	Total Solids %	Solids Not Fat	Fat.
2608	10-13-13	D. R. Atchinson	Livingston .....	.....	.....	20.5
2609	10-13-13	D. R. Atchinson	Livingston .....	.....	.....	16.0

MILK AND CREAM. Below Standard.

MILK:

Lab. No.	Date.	Obtained From.	Town.	Remarks.
2534	10- 6-13	O. K. Cafe	Glasgow.....	Low in fat.
2536	10- 6-13	E. D. Coleman	Glasgow.....	Low in solids not fat.
2538	10- 6-13	City Cafe	Glasgow.....	Low in fat.
2539	10- 6-13	T. A. Hange	Glasgow.....	Low in fat and solids not fat.
2541	10- 6-13	W. W. Waymire	Malta.....	Low in fat.
2584	10-13-13	Maud Odell	Sheridan.....	Low in fat.
2590	10-13-13	Ivan Slink	Sheridan.....	Low in fat and solids not fat.
2591	10-13-13	Mrs. Louis Romey	Virginia City.....	Low in fats.
2592	10-13-13	Mrs. Wm. Smith	Virginia City.....	Low in solids not fat.
2593	10-13-13	Mrs. G. D. Vickers ..	Virginia City.....	Low in fats.
2618	10-13-13	Dug Gillis	Twin Bridges.....	Low in fat.

CREAM:

2610	10-13-13	Park Restaurant	Livingston.....	Low in fat.
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***THE FUNCTION OF STATE AUTHORITIES IN THE
CONTROL AND IMPROVEMENT OF FOOD SUPPLIES.**

By H. E. Barnard, State Food Commissioner, Indianapolis, Ind.

Read before the General Sessions, American Public Health Association, Colorado Springs, Sept. 9, 1913.

Pure food control began with the efforts of city officials to regulate foods sold on local markets. For years this regulation extended no further than an attempt to prevent the sale of adulterated milk. Some thirty-five years ago the first state legislation was enacted and Massachusetts inaugurated a system of food control which since has been copied by most of the states. The states that begun pure food work prior to the passage of the Federal Pure Food Law found their efforts were largely futile because of the very great difficulty with which the character of foods manufactured outside of the state and shipped in interstate commerce could be controlled after they reached the point of distribution.

The passage of the Federal Food Law and of the Meat Inspection Act, provided means by which the quality and labeling of foods shipped in interstate trade might be regulated and it is to the credit of the Federal departments that these laws have been so adequately enforced. At the present time the officials working in the several states need give little heed to the character of goods produced in other states, for it is only occasionally that anything crosses the state line without first having been subjected to the inspection of the Federal official. But the work of state authorities, while to this extent diminished, is none the less necessary. Such important food problems as the milk supply, meats slaughtered by local butchers, bakery products, beverages and the thousand foods prepared and sold in a local way must be handled by state and municipal authorities. Certain of these problems are better regulated by the cities than by authority centered at state capitals. Others so intimately concern the welfare of the whole state that their control should be a function of the state health officials.

There may come a time when towns and cities are officered by trained, competent sanitarians who can care for all local food problems, but until that Utopian condition arrives the state, with its better organized health forces, better laboratories and non-political personnel must assume control and

provide for the safeguarding of the food supply after it has passed from Federal jurisdiction or as it originates and is distributed wholly within state limits.

A satisfactory meat inspection can never be attained unless the state assumes the responsibility for stamping out bovine tuberculosis and hog cholera. Prepared foods will never be surely clean until the state requires sanitary conditions at canning factories and manufactories. The state must compel all employees to bear certificates of freedom from disease and employers must insist upon such certificates as a prerequisite to employment.

Proper handling of food in transportation within the state can only obtain under state legislation.

The functions of state officials must conform to the laws which define their duties. Therefore, the first essential to satisfactory state work is adequate legislation. At the present time most of the states have more or less satisfactory pure food and sanitary food laws on the statute books, but even in states where legislation has been adequate the means for the enforcement of the laws have as yet not been provided or are so meager that the work cannot proceed with even moderate results. Health officers will naturally, and I believe properly, contend that the enforcement of pure food and sanitary food laws should be made a function of the department of public health. In many states, however, where the development of the dairy industry antedated any attempt to decrease death rates or improve sanitary conditions, pure food work was annexed to dairy work and up to the present time pure food and sanitary laws are enforced by commissioners of agriculture, dairy commissioners, and other officials whose duties only incidentally bring them in touch with pure food work as it is at present understood. Such officials may well regulate the sale of oleomargarine, they may be able to improve the quality of the milk supply, but they are hardly in touch with the sanitary problems of a pure water supply, meat inspection service and the sanitary operation of cold storage plants, canning factories, bakeshops and groceries.

When the health officers of the state are given control of sanitary and pure food laws they bring to their work an experience in the administration of public health measures. They are primarily interested in the character of the milk supply not because they wish to build up a dairy industry but because

they know that pure milk means decreased infant mortality. They are interested in sanitary slaughterhouses, not that the butchers may have a profitable business or that the production of beef and pork may be increased, but because they know that the sale of diseased meat and meat prepared and handled under unsanitary conditions is a menace to the health of the community. They know that pure water means freedom from typhoid; that the baker suffering from tuberculosis is gaining a livelihood under conditions which menace his patrons; that venereal diseases, so commonly rampant among lower grades of employees, must be stamped out if the consumers are to be assured clean food.

State authorities can work in fields where the local official cannot hope to enter. There is now developing throughout the country the reasonable belief that the men intrusted with the health of the state should be trained in service and immune from the disasters which usually follow the overthrow of one political machine and the success of another. Permanence in position gives the state official an opportunity to develop methods of work and secure results which are not possible in local communities where city officials, no matter how willing, no matter how well trained, are too frequently handicapped in their efforts by reason of the fact that their friends, supporters and neighbors are frequently out of harmony with the ordinances they are called upon to enforce. Such conditions do not confront the official whose office is at the capital, for if he be large enough his work proceeds without knowledge of politics, of friendships or local conditions which make for law violation.

To state authorities must be left the development of a state meat inspection service. Some cities can take up the work where the Federal inspectors leave it off and provide a satisfactory inspection, but the smaller cities and the country towns where the local butchers flourish cannot conduct an adequate inspection. That can only be done by the state, and it is the duty of the state to provide it.

While the Federal laws are being interpreted along such broad lines that the sanitary supervision of food factories will shortly be as important a phase of the work as the inspection of goods landed at our ports, the state officials must assume the responsibility for the cleanliness of all distributing agencies, the bakeshop, grocery store, confectionery, restaurant,

butchershop and ice cream parlor. All the little industries catering to a limited district must work under the supervision of state authorities and it is in just such places that the inspectors from state departments may find their greatest service. Healthy workmen, free from tuberculosis, venereal diseases and typhoid fever, can never be assured consumers until the state health officials require a certificate of health as essential to employment in food factories and distributing agencies. Perhaps the greatest function of the health official in the regulation and control of food industries lies in a better supervision of the health condition of employees. Heretofore health authorities have given much attention to benefiting the health of the workman. They have investigated the conditions under which he works, they have provided him fresh air and plentiful light, they have removed dangerous fumes from the work room, they have protected exposed machinery, but they have not inspected the workman and except in isolated cases they have been content to allow him his place at the bench or machine if he could do a man's work, making no inquiry into his moral life or condition of health. The future will see developed a large view of the functions of health officials that will result in such medical inspection that the consumers may know that his food supply is not only properly labeled, free from adulteration, produced in a cleanly workshop from sound raw material under sanitary conditions, but that it was produced, handled and distributed by workers whose touch was free from contagion and disassociated from the taint of disease.

Further state authorities are leaders in educational crusades. The Federal government up to the present has been chiefly interested in law enforcement, and local officials are sworn to see that city and town ordinances are obeyed.

The state officials must assume the dual responsibility not only of enforcing law but of bringing before the people, consumers and producers alike, the basic reasons that made legislation necessary and to point out, clearly and carefully, the economic principles that demand good food. The food official is no longer a police officer; he has assumed larger, more important duties; he is now a teacher, and his best work will be done outside the courtroom and the laboratory and among the common people who are so largely concerned both in the production and consumption of the food supply.

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PURIFICATION OF WATER IN SMALL QUANTITIES WITH BLEACHING POWDER.

The significance of the terms used in discussing the sanitary qualities of a water as defined by Whipple is shown by the following table:

WATER—

Polluted:

Befouled—Contains matter tending to make it unsightly or ill smelling, which is not of excrementitious origin.

Contaminated—Contains excreta from human beings or animals.

Infected—Contains germs of disease.

Poisoned—Contains a poisonous chemical substance.

It will be observed from the above that an infected water contains the germs of disease, and consequently such a water should not be used for domestic purposes. In this connection it should be understood that the germs most likely to infect a water and make it dangerous for drinking have their origin in the intestinal tract of human beings or animals. Consequently, a contaminated water should not be used for domestic purposes for the reason that it may be infected.

If for any reason a drinking water does become contaminated and dangerous for drinking it can be purified and made practically safe, as far as typhoid is concerned, by the following method:

Secure a pound can of bleaching powder or chloride of lime—which should be kept tightly closed—break up all lumps in a small portion of the powder and fill a teaspoon even full by levelling off with a small stick or lead pencil. This amount of bleaching powder is added to a few drops of water in a tea cup or glass and a thin paste is made. The paste is then diluted with water to a volume of one quart. This stock solution should be kept in a well stoppered bottle. A fresh stock solution should be made every three or four days. If the bleaching powder used was of normal strength then one teaspoon of the stock solution added to two gallons of water would ordinarily be sufficient to destroy germs of the intestinal type. It is seldom that bleaching powder bought from stock is of normal strength, consequently, the following procedure is recommended: Determine by experiment how many

teaspoons of stock solution are required to impart a slight odor to two gallons of water and use just a little less than the quantity necessary to impart an odor. Stir thoroughly and use for drinking in fifteen or twenty minutes. Under some conditions it would be convenient to treat water in fifty gallon lots.

The above method of purifying the home water supply should be adopted as soon as the sanitary qualities are under the least suspicion. Whenever it is apparent from a sanitary inspection that a private water supply is possibly contaminated and dangerous for drinking, health officers should recommend the above method of purification immediately. This action should be taken in such cases before sending a sample to the Water Laboratory for analysis. It takes a number of days to ship containers for samples and a further delay in waiting for the laboratory report and for this reason the steps outlined above have been suggested as a practical and necessary precaution that should be taken while waiting for a report from the laboratory.